

## ABSTRACT OF THE DISCLOSURE

An insulating film made of zirconia or hafnia is formed on the surface of a semiconductor substrate. A partial surface area of the insulating film is covered with a mask pattern. By using the mask pattern as a mask, ions  
5 are implanted into a region of the insulating film not covered with the mask pattern to give damages to the insulating film. By using the mask pattern as a mask, a portion of the insulating film is etched.